

REMARKS

Status of the Claims

Claims 1-8, 19, 20, 22-24 and 27-40 have been examined. Applicant hereby amends claims 1 and 20. After entry of this paper claims 1-8, 19, 20, 22-24 and 27-40 remain pending for examination.

Claim 1 has been rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite.

Claims 1-3, 5-8, 19, 22-24, 27-29, 31-32 and 33-34 have been rejected under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent No. 5,955,343 to Holmes ("Holmes A") in view of U.S. Patent No. 6,129,761 to Hubbell ("Hubbell").

Claim 4 has been rejected under 35 U.S.C. § 103(a) as allegedly obvious over Holmes A, in view of Hubbell and further in view of Holmes, et al., *Proc. Nat. Acad. Sci.* 2000, 97:6728-6733 ("Holmes B").

Claims 30, 33 and 40 have been rejected under 35 U.S.C. § 103(a) as allegedly obvious over Holmes A, in view of Hubbell and further in view of U.S. Patent No. 6,306,169 to Lee et al. ("Lee").

Claims 36-39 have been rejected under 35 U.S.C. § 103(a) as allegedly obvious over Holmes A, in view of Hubbell and further in view of U.S. Patent Nos. 5,175,093 to Seifert ("Seifert"), 5,472,869 to Krzyzek ("Krzyzek"), and 6,344,488 to Chenite ("Chenite").

Claim 20 is considered to be free of the prior art.

Amendments to the Claims

Claim 1 has been amended per the suggestion of the Examiner and claim 20 has been amended to place the claim in independent form. Support for the amendments is found at least from the context of the original claims; accordingly, no new matter is added.

Claim 20

Applicants note that the Office Action indicated that claim 20 was free of the prior art. Accordingly, Applicants have re-written claim 20 in independent form and respectfully submit that amended claim 20 is allowable.

Rejections under 35 U.S.C. § 112

Applicants have amended claim 1 per the Examiner's suggestion. Accordingly, Applicants submit that the rejection under §112, second paragraph has been overcome.

Rejections under 35 U.S.C. § 103

It is Applicants reading of the Office Action that the basis for the rejection of independent claim 1 is Holmes A in combination with Hubble. Applicant must respectfully disagree that Holmes A in combination with Hubble, or any other combination of the cited references, teaches or suggests to one of ordinary skill in the art Applicant's claim 1 as a whole.

Applicants submit that Hubble does not provide one of ordinary skill in the art with a reasonable expectation of successfully applying the teachings of Hubble to Holmes A or a motivation to do so.

First Applicant believes that Holmes teaches membranes with pores smaller than the dimension of cells, and does not believe the Office Action asserts otherwise. As a result, Applicants submit that the technique taught by Hubble (mixing cells into the pre-polymerized material) would not reasonably be expected to produce living cells within a beta sheet macroscopic scaffold, as set forth in Applicants' claims, when applied to Holmes A because the pore size of the membranes of Holmes A are smaller than the dimension of the cells.

Specifically, incorporation of such cells into the small pore structure of Holmes A would reasonably be expected to disrupt or prevent the formation of a beta sheet macroscopic scaffold structure in the regions where cells are contained. The result would be that Holmes A modified by Hubble would not be reasonably expected to have living cells within a beta sheet macroscopic scaffold as set forth in Applicants' claims. Even if areas of the membranes of Holmes A would still retain a beta sheet macroscopic scaffold structure, such regions would not be reasonably expected to contain living cells within these regions as set forth in Applicants' claims.

Applicants respectfully submit that absent a reasonable expectation of successfully modifying one reference with another (even if an modification attempt later is found to work) such a combination of references is improper and relies on applicant's teachings to provide the requisite reasonable expectation of success. Accordingly, Applicants submit that claim 1 is novel and non-obvious in view of Holms A and Hubble. It is Applicant's understanding that the other cited references, either alone or in combination with Holmes A and Hubble, are not asserted against claim. Thus Applicants' submit that claim 1, and claims 2-8, 19, 22-24 and 27-40 that depend ultimately therefrom are in condition for allowance.

CONCLUSION

In view of the above, it is believed that all presently pending claims are in condition for allowance, and it is respectfully requested that the claims be allowed. If the Examiner feels that a telephone call would expedite the prosecution of this case, the Examiner is invited to call the undersigned at (617) 248-5016.

Respectfully submitted,

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